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| 10/772,546 | 02/05/2004 | Yusuke Muraoka | P/4178-11 | 8939 |
| 2352 7590 05/13/2008 OSTROLENK FABER GERB & SOFFEN 1180 AVENUE OF THE AMERICAS NEW YORK, NY 100368403 | | | | |
| EXAMINER | | | | |
| PATEL, RITA RAMESH | | | | |
| ART UNIT | | PAPER NUMBER | | |
| 1792 | | | | |
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/772,546

Applicant(s)

MURAOKA ET AL.

Examiner

RITA R. PATEL

Art Unit

1792

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 April 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2,3,5,6,8,9,11,12 and 15-20 is/are pending in the application.
- 4a) Of the above claim(s) 2,3,5,6,15,17 and 18 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 8,9,11,12,16,19 and 20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 4/28/08 has been entered.

Response to Applicant's Arguments / Amendments

This Office Action is responsive to the amendment filed on 4/28/08. Claims 2, 3, 5, 6, 8, 9, 11, 12, and 15-20 are pending. Claims 1 and 7 have been canceled, in addition to already canceled claims 4, 10, and 13-14. Claims 2, 3, 5, 6, 15, 17, and 18 have been withdrawn from consideration. Claims 8, 16, and 19 have been amended.

Applicant's arguments have been considered, but are not persuasive. In Applicant's amendments, Applicant merely canceled claims 1 and 7, and then incorporated claims 1 and 7 into claim 8. Also claims 16 and 19 were amended to clarify dependency.

In re Applicant's specific arguments, Applicant argues that the prior art Mullee fails to disclose the following claim recitations: "blending means, a plurality of flow-rate control means, and pumping means". However Mullee does fairly suggest these claim

recitations by teaching the following: conduits formed between the solvent chambers directed towards the pressure vessel at least for collecting solvent from solvent chambers and combining/blending solvent therein (blending means occurs within the conduits); valves formed throughout the system including but not limited to valves 70 and 78 (plurality of flow rate means); and pump 92 (pumping means) which is in connection with at least the plural solvent chambers 44, 46 (chemical agent suppliers).

Thus, claims 8-9, 11-12, 16, and 19-20 are rejected for the reasons of record.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 8- 9, 11-12, 16, and 19-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mullee (US Patent No. 6,306,564).

Mullee teaches a high-pressure processing apparatus, namely a resist removal system 30 (Fig. 2) comprising the following: a pressure vessel 40 which internally includes a wafer processing chamber 42 for executing a surface treatment on a semiconductor wafer; a pump (high-pressure fluid supplier) which feeds carbon dioxide from tank 90 under pressure; a solvent chamber 44, 46 (mixing bath); conduits in connection with the solvent addition sources (chemical agent supplier) having valves 72, 80 connected thereto; valves 68, 74, 70, 76, 82, 78 (feedback control) for controlling

the channel of high-pressure fluid to flow through either solvent loop 116 or 118; and a recirculation loop 133 (recovery unit). The conduits in connection with the "solvent addition" sources are provided with valves 72, 80 for supplying all or some of chemical agents which are different from each other to said mixing baths 44, 46. The channel control system causes the mixture to be sent into the pressure vessel 40 (see col. 4, lines 3-8, 54-65).

Also Mullee illustrates conduits are formed between the solvent chambers directed towards the pressure vessel at least for collecting solvent from solvent chambers and combining/blending solvent therein (blending means occurs in said conduits), valves exist throughout the system including but not limited to valves 70 and 78 (plurality of flow rate means), and there is a pump 92 (pumping means) which is in connection with at least the plural solvent chambers 44, 46 (chemical agent suppliers).

Mullee discloses the claimed invention as a single system; however it would have been obvious to one of ordinary skill in the art at the time of the invention to duplicate the entire system such that many substrates can be processed simultaneously for large scale production. It is well settled that the mere duplication of parts has no patentable significance unless a new and unexpected result is produced. *In re Harza*, 124 USPQ 378 (CCPA 1960). Duplication of the system would result in increased wafer processing tanks, mixing tanks, pressure vessels, supply units and pumps, and thus decrease processing time because the wafers can all be processed concurrently. The duplication of said system would adhere to known and expected results in the wafer processing art since it would have been obvious to one of ordinary skill in the art at the

time of the invention to perform the same exact functions except for multiple wafers rather than just a single wafer.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to RITA R. PATEL whose telephone number is (571)272-8701. The examiner can normally be reached on M-F: 9-6.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Barr can be reached on (571) 272-1414. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Michael Barr/
Supervisory Patent Examiner, Art
Unit 1792

/Rita R. Patel/

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